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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,988	04/26/2001	Jemm Y. Liang	M-10710-IP US	7880

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EXAMINER

ANYASO, UCHENDU O

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,988

Applicant(s)

LIANG ET AL.

Examiner

Uchendu O Anyaso

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 13, 25-29, 31-39 and 41-46 is/are allowed.
- 6) ☒ Claim(s) 14-22, 47 and 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. **Claims 1-48** are pending in this action.

Claim Rejections - 35 USC ' 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 14-22, 47 and 48** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kurumisawa* (U.S. 6,262,704) in view of *Koshobu* (U.S. 5,764,225).

Regarding **independent Claims 1 and 48**, *Kurumisawa* teaches a liquid crystal display device comprising a row and column array wherein overlapping areas arrays of the two arrays define pixels of the display (figure 34A at 710, 720, Li, Si).

Furthermore, *Kurumisawa* teaches how at least one of the electrical potential supplied to the display matrix floats with a voltage supplied by electrically isolating the matrix (column 20, lines 55-63; column 21, lines 21-28, figure 34A, 34B).

However, *Kurumisawa* does not teach two separate power sources. On the other hand, *Koshobu* teaches a liquid crystal panel with scanning lines formed along the rows of the pixel electrodes signal lines formed along the columns of the pixel electrodes comprising at least two separate power sources (70, 80) (see column 4, lines 20-30, figure 1 at 70, 80). This provides a display capable of easily reducing flicker in a large-size display device (column 2, lines 32-34).

Thus, it would have been obvious to a person of ordinary skill in the art to combine *Kurumisawa* and *Koshobu* because while *Kurumisawa* teaches a liquid crystal display device comprising a row and column array wherein overlapping areas arrays of the two arrays define pixels of the display (figure 34A at 710, 720, Li, Si) wherein at least one of the electrical potential supplied to the display matrix floats with a voltage supplied, *Koshobu* teaches a liquid crystal panel with at least two separate power sources (70, 80) (see column 4, lines 20-30, figure 1 at 70, 80). The motivation for combining these inventions would have been to provide a display capable of easily reducing flicker in a display device (column 2, lines 39-49).

Furthermore, *Koshobu* teaches how the power supply voltage from a power supply circuit 70 is supplied to the scanning electrode drive circuit 20 and the power supply circuit 80 is supplied to the signal electrode drive circuit 50 wherein these power supply voltages are different voltages (column 6, lines 59-67, figure 1 at 20, 50, 70, 80).

Furthermore, *Koshobu* teaches how the power supply circuits have structures as shown in figures 7 & 8 that voltage divides the voltage supplied by the power supply circuits by means of resistors such that different types of liquid crystal drive voltages are in reference to a central voltage (column 7, lines 1-20).

Regarding **Claims 15-17 and 19-21**, in further discussion of claims 1 and 14, *Kurumisawa* teaches a liquid crystal display device comprising a row and column array wherein overlapping areas arrays of the two arrays define pixels of the display (figure 34A at 710, 720, Li, Si).

Furthermore, *Kurumisawa* teaches supplying electric potential to the row and column electrodes by teaching a voltage source 700 connected to the row and column drivers (figure 34A at 710, 720, Li, Si).

Regarding **Claims 18 and 22** in further discussion of claim 2, 14 and 17, *Koshobu* teaches a liquid crystal panel with scanning lines formed along the rows of the pixel electrodes signal lines formed along the columns of the pixel electrodes comprising at least two separate power sources (70, 80) (see column 4, lines 20-30, figure 1 at 70, 80).

Furthermore, *Kurumisawa* a reference voltage such that the voltage levels of the data lines are symmetrically distributed with its "predetermined reference voltage level" placed centrally with one half the voltage levels on the positive side and the other half on the negative side of the predetermined reference voltage level wherein the "predetermined reference voltage level" can be set to coincide with the scan voltage level during the non-selection period (column 3, lines 33-55).

Allowable Subject Matter

4. **Claims 1-11, 13, 25-29, 31-39 and 41-46** are allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 14-22, 47 and 48 have been considered but are not persuasive.

Regarding independent claim 14, applicant argues that this claim contains the limitation that one or more power sources drives the row electrodes through a first voltage ranges, and drives the column electrodes through a second voltage range. This concept is shown in Koshobu because Koshobu teaches how the power supply voltage from a power supply circuit 70 is supplied to the scanning electrode drive circuit 20 and the power supply circuit 80 is supplied to the signal electrode drive circuit 50 wherein these power supply voltages are different voltages (column 6, lines 59-67, figure 1 at 20, 50, 70, 80).

Furthermore, Koshobu teaches how the first voltage range changes over different addressing cycles by teaching how the power supply circuits have structures as shown in figures 7 & 8 that voltage divides the voltage supplied by the power supply circuits by means of resistors such that different types of liquid crystal drive voltages are in reference to a central voltage (column 7, lines 1-20).

The dependent claims 15-22 and 47 are rejected for at least being dependent on a rejected independent claim. As such, with respect to claims 14-22 and 47, the arguments presented are not persuasive.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Uchendu O. Anyaso

11/30/2003


STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600